BRUHAT BANGALORE MAHANAGARA PALIKE

PROJECT DIVISION YELAHANKA ZONE

ABSTRACT

Package-11

NAME OF WORK :1. Improvement of roads and drain at jakkur lake back side roads in ward no 05 byatarayanapura sub division.2) Providing street lights in ward no 05 surrounding areas byatarayanapura sub division. 3) Improvement of roads and drain at royal enclave in ward no 05 byatarayanapura sub division 4) Improvement of roads and drain at srirampura railway parlel road to jakkur railway gate in ward no 05 byatarayanapura sub division.5) Improvement of roads and drain at srirampura cross road in ward no 05 byatarayanapura sub division 6) Improvement of roads and drain at bellahalli surrounding area in ward no 05 byatarayanapura sub division .7) Development of roads and drain at shivaramakaranthanagara 2nd stage cross roads in ward no 05 byatarayanapura sub division.8)Improvement of roads and drain at jakkur cross roads in ward no 05 byatarayanapura sub division

SL NO	DESCRIPTION	SANCTIONED AMOUNT (IN LAKHS)
1	Improvement of roads and drain at jakkur lake back side roads in ward no 05 byatarayanapura sub division	40.00
2	Providing street lights in ward no 05 surrounding areas byatarayanapura sub division	25.00
3	Improvement of roads and drain at royal enclave in ward no 05 byatarayanapura sub division	30.00
4	Improvement of roads and drain at srirampura railway parlel road to jakkur railway gate in ward no 05 byatarayanapura sub division	75.00
5	Improvement of roads and drain at srirampura cross road in ward no 05 byatarayanapura sub division	30.00
6	Improvement of roads and drain at bellahalli surrounding area in ward no 05 byatarayanapura sub division	20.00
7	Development of roads and drain at shivaramakaranthanagara 2nd stage cross roads in ward no 05 byatarayanapura sub division	50.00
8	Improvement of roads and drain at jakkur cross roads in ward no 05 byatarayanapura sub division	25.00
	TOTAL AMOUNT	**295.00**
NOTE ;The sanctioned Amount includes estimate cost, DPR,PMC,&TP charges		

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
3 The workspot was inspected and work is found to be necessary.
4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

Assistant Engineer

Assistant Executive Engineer
Project- Yelahanka Division

Executive Engineer
Project-Yelahanka Division
20/11/17.

Technical Sanction
Accorded For 295.00 lakh Rs.
Head of A/C P3112
CER NO : 391 Dt: 28/11/17

TA CE (YNK)

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Drains at jakkur lake back side road in Ward No 05 Byatarayanapura Sub division

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Est Cost: =40.0Lakl Rate in Rs.	Amount in Rs.
1	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	ch 0-280		1.00	280.00	7.50	0.40	840.00		
	ch-280-raitharasanthe		1.00	30.00	7.50	0.40	**90.00**		
	ch-280-towards apartment		1.00	85.00	7.50	0.25	159.38		
							1089.38	155.16	**169028.2**
2	KSRRB M400-6.1. Construction of granular sub-base by providing close graded crushed stone aggregates of granite / trap / basalt material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications. A. Plant Mix Method. - For Grading II Materiall(P.No.155, I.No.20.4.2 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	ch 0-280		1.00	280.00	7.50	0.15	315		
	ch-280-raitharasanthe		1.00	30.00	7.50	0.15	33.75		
							348.75	1665.26	**580759.4**
3	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	ch 0-280		1.00	280.00	7.50	0.23	483.00		
	ch-280-raitharasanthe		1.00	30.00	7.50	0.23	51.75		
	ch-280-towards apartment		1.00	85.00	7.50	0.23	146.63		
							681.38	1768.08	**1204725.5**
4	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	ch 0-280		1	280.00	7.50	--	2100.00		
	ch-280-raitharasanthe		1	30.00	7.50	--	225.00		
	ch-280-towards apartment		1	85.00	7.50	--	637.50		
							2962.50	27.56	**81646.5**

KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
Road Portion	Sqm							
For Laying DBM								
ch 0-280		1	280.00	7.50	--	2100.00		
ch-280-raitharasanthe		1	30.00	7.50	--	225.00		
For Laying BC								
ch 0-280		1	280.00	7.50	--	2100.00		
ch-280-raitharasanthe		1	30.00	7.50	--	225.00		
ch-280-towards apartment		1	85.00	7.50	--	637.50		
						5287.50	11.66	**61652.25**
KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications.. MORTH Specification No. 507 - using 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No.165 of I.No.21.17.6 in PW,P&IWTD S.R 2016-17)								
Road Portion	Cum							
ch 0-280		1	280.00	7.50	0.05	105.00		
ch-280-raitharasanthe		1	30.00	7.50	0.05	11.25		
						116.25	6284.74	**730601.0**
KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
Road Portion	Cum							
ch 0-280		1	280.00	7.50	0.04	84.00		
ch-280-raitharasanthe		1	30.00	7.50	0.04	9.00		
ch-280-towards apartment		1	85.00	7.50	0.04	25.50		
						118.50	7083.98	**839451.6**

KSPRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, No.24.15 of PW,P&IWTD SR 2016-17)								
Edge line	Sqm	2	395.00	0.10	--	79.00		
						79.00	542.72	**42874.8**
							Total Construction Cost	**3710739.42**
							Cost towards Preparation of DPR LS	**37108.0**
							Cost towards PMC / Third Party inspection LS	**37108.0**
							Sub Total	**3784955.4**
							Miscellaneous and rounding off	**215044.5**
							Total	**4000000.0**

Certificate.

1) The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2) The provisions made in the estimate are necessary and essential.
3) The workspot was inspected and work is found to be necessary.
4) The area comes within the Bruhat Bangalore Mahanagara Palike limits.

Assistant Executive Engineer

Executive Engineer

20/11/1

BRUHAT BANGALORE MAHANAGARA PALIKE

Yelahanka Zone, Electrical Division

Name of Work:-Detailed Estime for Providing street lights in ward no 05 Surrounding 05 Surrounding areas Byatrayanapura sub division.

Budget Head :P3112

Ward No. 05 **Estimate No:-** **For Rs.** **2500000.00**

Description Of Work	Qty	Rate	Unit	Amount
KPWD (Ele) S.R.2014-15				
Supplying High pressure sodium vapour street light luminaire 250wsuitable for use with high pressure sodium vapour lamp with integrated control gear and grey colr powder coated. The fitting shall be non corrosive pressure die cast aluminium housing with high purity anodized aluminium housing with EPDM Gaskets suitable for Outer Dia of pole 40 mm -60 mm. Cable entry through a cable gland with toggle clips. IP65 protection for both optical & electrical compartment. Bottom cover may be with poly carbonate/tempered/ toughened glass.Luminaire efficiency should be > 60 % and ambient temperature +55 deg C. High Intensity Discharge electro magnetic ballast with copper winding of Orthocyclic winding coil. Class H insulated dual coated copper wire. Complaince to IEC 61347-2-9 Safety & IEC 60923-Performance. Winding Temperature rise "Tw-130deg C & temperature rise T=70 deg C. Luminaire shall be suitable to operate on 230/250 V 50 Hz AC supply finish including wiring , Ignitor, condenser, SS Toggles for opening front hingeable glass 250 Wattsa) Group 'A'	250	6900.00	Each	1725000.00
Supplying & fixing of 32 mm dia class A GI pipe bracket up to 2 mtrs long bent at suitable angle and fixing to this bracket 1x40/2x40 or rail or RCC pole/wall using suitable clamps, bolts, and nuts and wiring using suitable capacity wires complete. Using 32mm dia G.I pipe	250	893.00	Each	223250.00
Supplying of 1.1KV grade Aerial Bunched Cable Stranded & Compacted Aluminum Phase Conductor, and Stranded Messenger Conductor with all aluminum Alloy, Phase Conductor is insulated with XLPE Compound, insulated Messenger with specified IS-14255:1995 & Conforming to GTP of GROUP-A2 X 25 + 1 X 25 SQ.MM	1000	143.00	Per Mtr	143000.00
Stringing of 1.1kv LT Arial Bunched Cable, BESCOM	1000	10.30	Per Mtr	10300.00
Supply and Installation / Fixing / Provision of Pole box with HRC Fuse / MCB provision and suitable connector / terminal for 3 Ph / 1 Ph connections with Loop-In & Loop-Out terminals for 10 Sqmm / 25 Sqmm 3.5 C Al/Ar / Cu/Ar Cable and branch out 2.5 Sqmm 2 core Al/Cu PVC insulated cable, enclosed in a Thermoplastic, Polyethylene enclosure, which should be shock proof, dust IP65(Weather Proof), rust proof, dust proof, water proof having Internally Embedded Gasket with provision for cable entry through IP65 Thermoplastic, polyamide glands and/or grommets.200mmx200mmx98mm	41	2178.00	Nos	89298.00

4K-0.39 1	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. And M.S. flat... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. a)40X40X6mm	25	263.00	Mtrs	6575.00
4KE.13 A1	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts and wiring complete. Protection of Overload and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS-13947. (Icu = Ics) THREE POLE 100Amps25kA.	42	4044.00	Nos	169848.00
24E.11	Supplying and stringing of ACSR Conductor (6/2.59mm Al +1/2.59mm Steel).	3000	30.00	Mtrs	90000.00
24E.31	Supplying and Fixing .....including all Hardware's etc. complete as per the standard technical specification of BESCOM. A)1.1 KV Pin Insulator	80	44.00	Nos	3520.00
24E.32	No. 8 Strain Insulator	40	14.00	Nos	560.00
24E.61	Supplying and Fixing ..... including all Hardware's etc. complete as per the standard technical specification of BESCOM. RCC Clamp	99	84.00	Nos	8316.00
24E.62	Supply and fixing of .....cross arm including all Hardware's complete as per the standard technical specification of BESCOM. 2 Pin 45x45x5mm -510mm	99	306.00	Nos	30294.00
	Mislenious				39.00
	Total Rs				**2500000.00**

CERTIFICATE :-

The site was inspected and the work is essential.

The provision made in the estimate are adequate and necessary and the work comes in the BBMP limit and is legitimate Charges on the BBMP funds.

The estimate is based on KPWD (Ele) S.R.2014-15 Rates.and BESCOM SR 16-17.

Asst. Exe.Engineer (Elec)
Sub-Division No.
Bruhat Bangalore Mahanagara Palike

EXECUTIVE ENGINEER (ELEC)
YELAHANKA DIVISION
BRUHAT BANGALORE MAHANAGARA PALIKE

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Drains at Royal Enclave in Ward No 05 Byatarayanapura Sub division

Est Cost: =30.0Lakh

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	KSRRB 200-8. Clearing and grubbing road land including uprooting rank vegetation, grass, brush, shrubs, saplings and trees of girth upto 300mm, by manual means, in area of light jungle, removal of stumps, disposal of unserviceable materials, stacking of serviceable materials labour charges complete as per specifications. MORTH / Chapter 2 (P.No.136, I.No.18.11 of PW, P&IWTD SR 2016-17)								
	Perivinkal Road	Cum							
	Ch 0-300		2	300.00	1.00		600.00		
							600.00	6.36	**3816.00**
2	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Royal Enclave Layout								
	Ashoka Trust Reachers Center gate								
	Ch 0-175		1	175.00	5.50	0.23	221.38		
	Perivinkal Road								
	Ch 225-300		1	75.00	5.50	0.23	94.88		
	Bad Reaches								
			10	2.00	3.00	0.23	13.80		
			12	2.00	2.00	0.23	11.04		
			10	1.50	1.50	0.23	5.18		
							346.27	155.16	**53726.48**
3	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Royal Enclave Layout	Cum							
	Ashoka Trust Reachers Center gate								
	Ch 0-175		1	175.00	5.50	0.23	221.38		
	Perivinkal Road								
	Ch 225-300		1	75.00	5.50	0.23	94.88		
	Bad Reaches								
			10	2.00	3.00	0.23	13.80		
			12	2.00	2.00	0.23	11.04		
			10	1.50	1.50	0.23	5.18		
							346.27	1768.08	**612224.22**

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
4	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Royal Enclave Layout	Sqm							
	Ashoka Trust Reachers Center gate								
	Ch 0-175		1	175.00	5.50	--	962.50		
	Perivinkal Road								
	Ch 225-300		1	75.00	5.50	--	412.50		
	Bad Reaches								
			10	2.00	3.00	--	60.00		
			12	2.00	2.00	--	48.00		
			10	1.50	1.50	--	22.50		
							1505.50	27.56	**41491.58**
5	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Royal Enclave Layout	Sqm							
	Perivinkal Road								
	Ch 0-225		1	225.00	5.50	--	1237.50		
	3rd Cross Road		1	160.00	5.00	--	800.00		
	4th A Cross Rd		1	60.00	5.00	--	300.00		
	4th B Cross Rd		1	60.00	5.00	--	300.00		
	near by Cross Road		4	100.00	5.00	--	2000.00		
	Cross Road 1		1	45.00	5.00	--	225.00		
							4862.50		
	Deduct prime coat						-130.50		
							4732.00	3.18	**15047.76**
6	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	Royal Enclave Layout	Sqm							
	For Laying BC								
	Ashoka Trust Reachers Center gate								
	Ch 0-175		1.00	175.00	5.50	--	962.50		
	Perivinkal Road								
	Ch 0-225		1.00	225.00	5.50	--	1237.50		
	Ch 225-300		1.00	75.00	5.50	--	412.50		
	3rd Cross Road		1.00	160.00	5.00	--	800.00		
	4th A Cross Rd		1.00	60.00	5.00	--	300.00		
	4th B Cross Rd		1.00	60.00	5.00	--	300.00		
	near by Cross Road		4.00	100.00	5.00	--	2000.00		
	Cross Road 1		1.00	45.00	5.00	--	225.00		
							6237.50	11.66	**72729.25**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
7	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	Royal Enclave Layout	Cum							
	For Laying BC								
	Ashoka Trust Reachers Center gate								
	Ch 0-175		1.00	175.00	5.50	0.04	38.50		
	Perivinkal Road								
	Ch 0-225		1.00	225.00	5.50	0.04	49.50		
	Ch 225-300		1.00	75.00	5.50	0.04	16.50		
	3rd Cross Road		1.00	160.00	5.00	0.04	32.00		
	4th A Cross Rd		1.00	60.00	5.00	0.04	12.00		
	4th B Cross Rd		1.00	60.00	5.00	0.04	12.00		
	near by Cross Road		4.00	100.00	5.00	0.04	80.00		
	Cross Road 1		1.00	45.00	5.00	0.04	9.00		
							249.50	7083.98	**1767453.01**
8	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line	Sqm	2	1200.00	0.10	--	240.00		
							240.00	542.72	**130252.80**
							Total Construction Cost		**2696741.100**
9							**Cost towards Preparation of DPR LS**		**26968.00**
10							**Cost towards PMC / Third Party inspection LS**		**26968.00**
								Sub Total	**2750677.10**
11							**Miscellaneous and rounding off**		**249322.90**
								Total	**3000000.00**

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
3 The workspot was inspected and work is found to be necessary.
4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

Assistant Engineer | Assistant Executive Engineer | Executive Engineer 20/11/17

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Drains at srirampura Railway Parallel Road to Jakkur Railway Gate in Ward No 05 Byatarayanapura Sub division

Est Cost: =75.0Lakh

Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
			m	m	m			
KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
Desilt	Cum							
Shivaram Karanth 2nd Phase								
Railway parallel road		2	380.00	0.50	0.30	114.00		
Over Burden Earth								
		2	250.00	0.70	0.50	175.00		
						289.00	186.92	**54019.88**
KSRRB M300- Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification No.								
Road Portion	Cum							
Shivaram Karanth 2nd Phase								
Railway parallel road ch 0-30		1	30.00	11.50	0.25	86.25		
ch 30-380		1	350.00	11.50	0.25	1006.25		
ch 380-430		1	50.00	11.50	0.25	143.75		
						1236.25	320.12	**395748.35**
KSRRB M400-6.1. Construction of granular sub-base by providing close graded crushed stone aggregates of granite / trap / basalt material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications. A. Plant Mix Method. - For Grading II Materiall(P.No.155, I.No.20.4.2 of PW,P&IWTD S.R 2016-17)								
Road Portion	Cum							
Shivaram Karanth 2nd Phase								
Railway parallel road ch 0-30		1	30.00	9.00	0.15	40.50		
ch 30-380		1	350.00	9.00	0.15	472.50		
ch 380-430		1	50.00	9.00	0.15	67.50		
						580.50	1665.26	**966683.43**

4	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Shivaram Karanth 2nd Phase	Cum							
	Railway parallel road ch 0-30		1	30.00	9.00	0.20	54.00		
	ch 30-380		1	350.00	9.00	0.20	630.00		
	ch 380-430		1	50.00	9.00	0.20	90.00		
							774.00	1768.08	**1368493.92**
5	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kg\sqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Shivaram Karanth 2nd Phase	Cum							
	Railway parallel road ch 0-30		1	30.00	9.00	--	270.00		
	ch 30-380		1	350.00	9.00	--	3150.00		
	ch 380-430		1	50.00	9.00	--	450.00		
							3870.00	27.56	**106657.20**
6	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Railway parallel road	Sqm							
	Ch 430-1250		1	820.00	9.00	--	7380.00		
							7380.00	3.18	**23468.4**
7	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	Shivaram Karanth 2nd Phase	Sqm							
	For Laying DBM								
	Railway parallel road ch 0-30		1	30.00	9.00	--	270.00		
	ch 30-380		1	350.00	9.00	--	3150.00		
	ch 380-430		1	50.00	9.00	--	450.00		
	For Laying BC								
	Railway parallel road ch 0-30		1	30.00	9.00	--	270.00		
	ch 30-380		1	350.00	9.00	--	3150.00		
	ch 380-430		1	50.00	9.00	--	450.00		
	Ch 430-1250		1.00	820.00	9.00	--	7380.00		
							15120.00	11.66	**176299.**
8	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications.. MORTH Specification No. 507 - using 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No.165 of I.No.21.17.6 in PW,P&IWTD S.R 2016-17)								

	Shivaram Karanth 2nd Phase	Cum							
	Railway parallel road ch 0-30		1	30.00	9.00	0.05	13.50		
	ch 30-380		1	350.00	9.00	0.05	157.50		
	ch 380-430		1	50.00	9.00	0.05	22.50		
							193.50	6284.74	**1216097.19**
9	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	Shivaram Karanth 2nd Phase	Cum							
	Railway parallel road ch 0-30		1	30.00	9.00	0.03	8.10		
	ch 30-380		1	350.00	9.00	0.03	94.50		
	ch 380-430		1	50.00	9.00	0.03	13.50		
	Ch 430-1250		1	820.00	9.00	0.03	221.40		
							337.50	7083.98	**2390843.25**
10	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line	Sqm	2	1250.00	0.10	--	250.00		
	Center line		0.5	1250.00	0.10	--	62.50		
							312.50	542.72	**169600.00**
							Total Construction Cost		**6867910.820**
							Cost towards Preparation of DPR LS		**68680.00**
11							**Cost towards PMC / Third Party inspection LS**		**68680.00**
12								**Sub Total**	**7005270.82**
							Miscellaneous and rounding off		**494729.18**
13								**Total**	**7500000.00**

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
3 The workspot was inspected and work is found to be necessary.
4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

Assistant Executive Engineer

Executive Engineer. 20/11/17

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Drains at Srirampura Cross roads in Ward No 05 Byatarayanapura Sub division

Est Cost: =30.0Lakh

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Opposite to Govt. School Road	Cum							
	New Drain		2	45.00	1.10	1.00	98.51		
	Main Road								
	Desilt		1	65.00	0.50	0.45	14.63		
	Cross Road 2		1	66.00	0.50	0.45	14.85		
	Cross Road 3						**127.98**	186.92	**23922.02**
2	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Opposite to Govt. School Road		1	75	7.00	0.25	131.25		
	Main Road		1	75	6.20	0.25	116.25		
	Cross Road 2		1	75	6.00	0.25	112.50		
	Cross Road 3						**360.00**	155.16	**55857.60**
3	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	For Drain	Cum							
	Main Road		2	45	1.10	0.15	14.85		
	For Road Portion								
	Main Road		1	75	7.00	0.15	78.75		
	Cross Road 2		1	75	6.20	0.15	69.75		
	Cross Road 3		1	75	6.00	0.15	67.50		
							230.85	5348.76	**1234761.25**
4	Providing laying plain/ reinforced cement concrete M20 Grade for Box Drain walls of thickness 10cm to 20cm including centering shuttering for work etc. complete as per approved drawing and design MORTH specification No. 1500, 1700, 2200. (P.No.265, I.No.37.59.2 of PW, P&IWTD SR 2016-17)								
	Drain	Cum							
	Bottom Raft		2.00	45.00	0.90	0.15	12.15		
	Main Road								
	Walls		4.00	45.00	0.15	0.70	18.77		
	Main Road						**30.92**	11032.48	**341069.12**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
5	KSRB - 4.9.2: Providing TMT steel reinforcement Fe500 for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3. (P.No.17, I.No.4.46.2 of PW, P&IWTD SR 2016-17)								
	Consider 50Kgs/cum for only RCC Drain Qty	Tonne		30.92	0.050	--	1.55		
							1.55	64243.42	**99577.30**
6	Providing and fixing **RCC Precast cover slab of 100mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Cover Slab	Sqm							
	Main Road		2	45.00	0.90		81.00		
							81.00	2100.00	**170100.00**
7	Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. - M30 (at 360Kg per cum coarse aggregate @ 0.69cum and fine aggregate @ 0.46cum) ((P.No.177, I.No.22.6.1 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	Main Road		1.00	75.00	7.00	0.10	52.50		
	Cross Road 2		1.00	75.00	6.20	0.10	46.50		
	Cross Road 3		1.00	75.00	6.00	0.10	45.00		
							144.00	6217.96	**895386.24**
8	Vaccum de-watering with vaccum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift.(P.No.177, I.No.22.7 of PW, P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Main Road		1.00	75.00	7.00	--	525.00		
	Cross Road 2		1.00	75.00	6.20	--	465.00		
	Cross Road 3		1.00	75.00	6.00	--	450.00		
							1440.00	95.40	**137376.00**
							Total Construction Cost		**2958049.526**
9							**Cost towards Preparation of DPR LS**		**29581.00**
10							**Cost towards PMC / Third Party inspection LS**		**12380.00**
								Sub Total	**3000010.53**
11							**Miscellaneous and rounding off**		**-10.53**
								Total	**3000000.00**

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
3 The workspot was inspected and work is found to be necessary.
4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

Assistant Engineer

Assistant Executive Engineer

Executive Engineer

20/11/17

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Drains at Bellahalli surrounding area in Ward No 05 Byatarayanapura Sub division

Est Cost: =20.0Lakh

Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Cum							
		5	100.00	0.45	0.45	101.25		
						101.25	186.92	**18925.65**
KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub-base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Cum							
		5	100.00	5.00	0.22	550.00		
						550.00	1768.08	**972444.00**
KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Sqm							
		5	100.00	5.00	--	2500.00		
						2500.00	27.56	**68900.00**
KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray unit (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	Sqm							
		5	100.00	5.00	--	2500.00		
						2500.00	11.66	**29150.00**
KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	Cum							
		5	100.00	5.00	0.04	100.00		
						100.00	7083.98	**708398.00**

W800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive applied glass beads as per IRC:35. The finished surface to be level, uniform and free streaks and holes complete as per specifications. MORTH Specification No. 185, I.No.24.15 of PW,P&IWTD SR 2016-17)								10
	Sqm	2	500.00	0.10	--	100.00		
						100.00	542.72	**54272.0**
Total Construction Cost								**1852089.65**
Cost towards Preparation of DPR LS								**18521.0**
Cost towards PMC / Third Party inspection LS								**18521.0**
Sub Total								**1889131.6**
Miscellaneous and rounding off								**110868.3**
Total								**2000000.0**

adopted based on the PWD SR, Bangalore circle for year 2016-17.
provisions made in the estimate are necessary and essential.
Spot was inspected and work is found to be necessary.
comes within the Bruhat Bangalore Mahanagara Palike limits.

Assistant Executive Engineer

Executive Engineer 20/11/1

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Drains at Shivaramkaranthnagara 2nd stage cross Road in Ward No 05 Byatarayanapura Sub division

Est Cost: =50.0Lakh

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	KSRRB 200-8. Clearing and grubbing road land including uprooting rank vegetation, grass, brush, shrubs, saplings and trees of girth upto 300mm, by manual means, in area of light jungle, removal of stumps, disposal of unserviceable materials, stacking of serviceable materials labour charges complete as per specifications. MORTH / Chapter 2 (P.No.136, I.No.18.11 of PW, P&IWTD SR 2016-17)								
	Shivaramkaranth 2nd stage	Cum							
	Towards canal								
	1st A Cross Road		2	90.00	1.50		270.00		
	1st Cross Road		2	440.00	1.50		1320.00		
	2nd Cross Road		2	435.00	1.50		1305.00		
	3rd Cross road		2	400.00	1.50		1200.00		
	4th Cross Road		2	475.00	1.50		1425.00		
	5th Cross Road		2	445.00	1.50		1335.00		
	6th Cross Road		2	315.00	1.50		945.00		
							7800.00	6.36	**49608.00**
2	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Towards canal								
	1st A Cross Road		2	90.00	0.50	0.45	40.50		
	1st Cross Road		2	440.00	0.50	0.45	198.00		
	2nd Cross Road		2	435.00	0.50	0.45	195.75		
	3rd Cross road		2	400.00	0.50	0.45	180.00		
	4th Cross Road		2	475.00	0.50	0.45	213.75		
	5th Cross Road		2	445.00	0.50	0.45	200.25		
	6th Cross Road		2	315.00	0.50	0.45	141.75		
							1170.00	186.92	**218696.40**
3	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Bad Reaches								
			10	2.00	2.50	0.23	11.50		
			8	1.80	1.50	0.23	4.97		
			12	1.60	1.60	0.23	7.07		
			12	1.80	1.70	0.23	8.45		
							31.98	155.16	**4961.89**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
4	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub-base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Bad Reaches	Cum							
			10	2.00	2.50	0.23	11.50		
			8	1.80	1.50	0.23	4.97		
			12	1.60	1.60	0.23	7.07		
			12	1.80	1.70	0.23	8.45		
							31.98	1768.08	**56541.78**
5	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Bad Reaches	Cum							
			10	2.00	2.50	--	50.00		
			8	1.80	1.50	--	21.60		
			12	1.60	1.60	--	30.72		
			12	1.80	1.70	--	36.72		
							139.04	27.56	**3831.94**
6	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Shivaramkaranth 2nd stage	Sqm							
	Towards canal		1	90.00	4.50	--	405.00		
	1st A Cross Road		1	440.00	4.50	--	1980.00		
	1st Cross Road		1	435.00	5.00	--	2175.00		
	2nd Cross Road		1	400.00	5.00	--	2000.00		
	3rd Cross road		1	475.00	5.00	--	2375.00		
	4th Cross Road		1	445.00	5.00	--	2225.00		
	5th Cross Road		1	315.00	5.00	--	1575.00		
	6th Cross Road						**12735.00**		
							-139.04		
	Deduct prime coat						**12595.96**	3.18	**40055.15**
7	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	Shivaramkaranth 2nd stage	Sqm							
	For Laying BC								
	Towards canal		1	90.00	4.50	--	405.00		
	1st A Cross Road		1	440.00	4.50	--	1980.00		
	1st Cross Road		1	435.00	5.00	--	2175.00		
	2nd Cross Road		1	400.00	5.00	--	2000.00		
	3rd Cross road		1	475.00	5.00	--	2375.00		
	4th Cross Road		1	445.00	5.00	--	2225.00		
	5th Cross Road		1	315.00	5.00	--	1575.00		
	6th Cross Road						**12735.00**	11.66	**148490.10**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
8	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								6
	Shivaramkaranth 2nd stage	Cum							
	Towards canal								
	1st A Cross Road		1	90.00	4.50	0.04	16.20		
	1st Cross Road		1	440.00	4.50	0.04	79.20		
	2nd Cross Road		1	435.00	5.00	0.04	87.00		
	3rd Cross road		1	400.00	5.00	0.04	80.00		
	4th Cross Road		1	475.00	5.00	0.04	95.00		
	5th Cross Road		1	445.00	5.00	0.04	89.00		
	6th Cross Road		1	315.00	5.00	0.04	63.00		
							509.40	7083.98	**3608579.41**
9	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line	Sqm	2	2600.00	0.10	--	520.00		
							520.00	542.72	**282214.40**
							Total Construction Cost		**4412979.070**
10							**Cost towards Preparation of DPR LS**		**44130.00**
11							**Cost towards PMC / Third Party inspection LS**		**44130.00**
								Sub Total	**4501239.07**
12							**Miscellaneous and rounding off**		**498760.93**
								Total	**5000000.00**

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
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Assistant Engineer

Assistant Executive Engineer

Executive Engineer. 20/11/17

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads and Drains at Jakkur Cross roads in Ward No 05 Byatarayanapura Sub division

Est Cost: =25.0Lakh

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB M200-13.1. **Dismantling of existing structures** like culverts, bridges, retaining walls and other structure comprising of masonry. cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications.**-do- II. By Mechanical Means. A. Cement Concrete Grade M-15 & M-20.** (P.No.137, I.No.18.20 of PW, P&IWTD SR 2016-17)								
	for Concrete road								
	4th Cross Road		1	60.00	4.00	0.20	48.00		
	5th Cross Road		1	70.00	4.00	0.20	56.00		
							104.00	482.45	**50174.80**
2	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	1st Cross Road		2	60.00	0.50	0.45	27.00		
	2nd Cross Road		1	120.00	0.50	0.45	27.00		
	4th Cross Road		2	65.00	0.50	0.45	29.25		
	5th Cross Road		1	75.00	0.50	0.45	16.88		
							100.13	186.92	**18715.37**
3	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	1st Cross Road		1	60.00	3.50	0.25	52.50		
	2nd Cross Road		1	120.00	5.30	0.25	159.00		
	4th Cross Road		1	65.00	4.90	0.25	79.63		
	5th Cross Road		1	75.00	4.80	0.25	90.00		
							381.13	155.16	**59135.36**
4	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	For Road Portion	Cum							
	1st Cross Road		1	60.00	3.50	0.15	31.50		
	2nd Cross Road		1	120.00	5.30	0.15	95.40		
	4th Cross Road		1	65.00	4.90	0.15	47.78		
	5th Cross Road		1	75.00	4.80	0.15	54.00		
							228.68	5348.76	**1223127.69**

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
5	Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. - M30 (at 360Kg per cum coarse aggregate @ 0.69cum and fine aggregate @ 0.46cum) ((P.No.177, I.No.22.6.1 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	1st Cross Road		1.00	60.00	3.50	0.10	21.00		
	2nd Cross Road		1.00	120.00	5.30	0.10	63.60		
	4th Cross Road		1.00	65.00	4.90	0.10	31.85		
	5th Cross Road		1.00	75.00	4.80	0.10	36.00		
							152.45	6217.96	**947928.00**
6	Vaccum de-watering with vaccum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift.(P.No.177, I.No.22.7 of PW, P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	1st Cross Road		1.00	60.00	3.50	--	210.00		
	2nd Cross Road		1.00	120.00	5.30	--	636.00		
	4th Cross Road		1.00	65.00	4.90	--	318.50		
	5th Cross Road		1.00	75.00	4.80	--	360.00		
							1524.50	95.40	**145437.30**
							Total Construction Cost		**2444518.523**
7					**Cost towards Preparation of DPR LS**				**24446.00**
8				**Cost towards PMC / Third Party inspection LS**					**24446.00**
								Sub Total	**2493410.52**
9					**Miscellaneous and rounding off**				**6589.48**
								Total	**2500000.00**

Certificate.

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Assistant Engineer | Assistant Executive Engineer | Executive Engineer 20/11/17